

Title (en)
SEMICONDUCTOR ELEMENT AND PROCESS FOR PRODUCING SEMICONDUCTOR ELEMENT

Title (de)
HALBLEITERELEMENT UND VERFAHREN ZUR HERSTELLUNG DES HALBLEITERELEMENTS

Title (fr)
ÉLÉMENT À SEMI-CONDUCTEUR ET PROCÉDÉ POUR LA PRODUCTION D'UN ÉLÉMENT À SEMI-CONDUCTEUR

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Application
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Abstract (en)
A semiconductor device has a satisfactory ohmic contact on a p-type principal surface tilting from a c-plane. The principal surface 13a of a p-type semiconductor region 13 extends along a plane tilting from a c-axis (axis <0001>) of hexagonal group-III nitride. A metal layer 15 is deposited on the principal surface 13a of the p-type semiconductor region 13. The metal layer 15 and the p-type semiconductor region 13 are separated by an interface 17 such that the metal layer functions as a non-alloy electrode. Since the hexagonal group-III nitride contains gallium as a group-III element, the principal surface 13a comprising the hexagonal group-III nitride is more susceptible to oxidation compared to the c-plane of the hexagonal group-III nitride. The interface 17 avoids an increase in amount of oxide after the formation of the metal layer 15 for the electrode.

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